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The A&M Marine Laboratory: The Legacy of Building 311 Fort Crockett

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Recently, following the closure of what may be my last participation in a doctoral preliminary oral examination, my thoughts turned to reminiscing on the role the Texas A&M Marine Laboratory has played in establishing an ''Aggie'' presence in Galveston, TX.

In 1952, the Texas A&M Marine Laboratory was initially housed in a wooden-framed building, surplus from World War II. It was located on the campus of the University of Texas Medical Branch (UTMB) in Galveston, TX. Doctor John G. Mackin of the Oceanography Department at Texas A&M College supervised this facility and several graduate students working on biology and diseases of oysters. Other scientists and their graduate students were working on geological problems. In 1956, the Oceanography Department, headed by Dr. Dale Leipper, acquired the use of Building 311 (now 3311) at Fort Crockett, another World War II surplus facility, as a shore-based facility. Building 311, unoccupied for several years prior to acquisition by Texas A&M University (TAMU), was sound, but its interior was in terrible condition. Its flooring of battleship linoleum was buckled and badly deteriorated, and the building was a haven for rats, roaches, and pigeons. Lights were kept on in our meager library on the second floor to discourage the rats and roaches from eating our few books and papers. Walking into a darkened room at night, you could hear snap, crackle, and pop as you walked on a carpet of roaches to reach a light switch.

Despite its conditions, the availability of Building 311 was an important first step in establishing Texas A&M's presence in Galveston. This space allowed the development of various A&M activities with little initial investment obtained from existing budgets. The Texas A&M Marine Laboratory was the initial occupant of Building 311. At the time, no money was available for furniture or room renovations.

This situation reminds me of Resident Scientist Albert Collier's office desk, a five section wrap-around desk made of plywood. I later inherited this desk, and there was always plenty of room for it as my office was moved from room to room. As the laboratory began to grow, my office was moved to smaller and smaller spaces, with each move resulting in the loss of a section of my desk. Finally, only the central section remained. However, I always viewed the reduction of my desk's size to be a barometer of the laboratory's growth. Today, the sight of the old furniture or equipment in the basement of Fort Crockett or on the campus' surplus list prompts me to muse, ''…wish we could have had those discards in the old days.''

This facility was supervised by Resident Scientist Albert Collier (On Feb. 25, 2007, my wife and I had the good fortune to celebrate my 88th birthday with my mentor, Albert Collier, now 96 and his wife Mrs. Collier, 94) and Dr. Peter Rae, the laboratory director, who resided on the College Station campus. Albert Collier, Dr. Robert E. Stevenson, geologist, and I formed the professional staff. During this period (1956–1963) the laboratory served as a shore base for the R/V *Hidalgo* and later its replacement R/V *Alaminos*, contract research, student research, and teachers' summer institutes. In addition to three research scientists, the support staff consisted of a business manager Wayne Cotter; building superintendent, Ben Alexander; clerical personnel, Doris Burns and Ester Sell; custodian, James Scott; and a variable number of research assistants (Fig. 1).

In May 1960, the Texas A&M Research Foundation closed its field station in Grand Isle, LA. With this closure, I joined the laboratory's staff in Galveston. In the transfer, considerable laboratory equipment and one window air-conditioner were moved to Galveston with a U-Haul trailer and rusted out pick-up truck. Since joining the Texas A&M Research Foundation in July 1957, I worked on the Foundation's Project 23 (oyster-damage project) supported by various oil companies. After Project 23 was transferred from Grand Isle, LA, to Galveston, TX, the project was directed by Dr. Rae and I did the work. At this time, I had the only air-conditioned space in Building 311 and the only university-provided transportation (the rusted out pick-up truck). For several years we had to use our own vehicles for laboratory travel. After the rusted out pick-up truck from Grand Isle collapsed, Dr. David Aldrich and I bought an old pick-up truck for our graduate students to use for field trips. From its initial occupancy of Building 311, the Marine Laboratory never had a vehicle for

Fig. 1. Sammy M. Ray at his desk, circa 1965.

business use. The vehicle request was deleted from the budget each biennium.

This lack of vehicles prompts me to recall a story of the rusty vehicle from Grand Isle. In the mid-1960s, three faculty members wished to attend a meeting in Cincinnati, OH, but we had no travel funds. Thus, three of us took off in the rusty truck. We lost a fender in Arkansas and a headlight in Kentucky. Since this truck had an A&M sign on the door, we were embarrassed to park in front of the hotel for fear of being seen by an A&M administrator. We joked that we could find our way back to Galveston by following the trail of lost truck parts.

In 1960 funding, $100,000 ($50,000 from the National Science Foundation and $50,000 matching from Texas A&M College) was received for renovation and air-conditioning the west wing of Building 311. This renovation greatly improved the facility for instructional and research activities. Despite improvements in the facility, the formal instructional activity was limited to a graduate geological oceanography course offered by Dr. Stevenson in the summer of 1963.

In Oct. 1962, Albert Collier left to become director of the Oceanographic Institute at Florida State University. This event gutted the Marine Laboratory of both professional personnel and research projects. The assets of the laboratory were reduced to one professional (me), three support staff members, and one research project. I was named laboratory director by Dean Frank Hubert (College of Science and Education), on Sept. 1, 1963 (over the objections of Dr. Leipper) and was supplied an operational budget of $25,000 for the next fiscal year ($4,000 was required to pay the annual utility bill). The outlook for continued existence of the Marine Laboratory appeared bleak. However, the period of 1963 to 1968 was one of slow but steady growth in instructional and research programs. The strong support of Dean Hubert in obtaining authority for the Marine Laboratory to offer resident credit for both undergraduate and graduate marine-oriented courses was instrumental for this positive turn around.

At this point I am compelled to interject an admonition that was given to me by the late Dr. Gordon Gunter (whom I consider to be the father of Marine Biology of the Gulf of Mexico). On learning that I had been named laboratory director, Dr. Gunter called to offer his congratulations. During the call he said to me, ''If you don't get a resident teaching program for the laboratory, you are doomed to failure.'' I took his advice to heart and immediately began working to get permission to offer courses at the lab for resident credit.

The first course offered at the Marine Laboratory for formal resident credit was Biology of the Mollusca (in the summer of 1964). Eleven graduate students enrolled, and the course was taught by Dr. John Mackin (Head, Biology Department), Dr. Harold W. Harry (Rice University), and me. Doctor Donald Harper, recently retired professor of TAMU Galveston (TAMUG) Marine Biology Department, was a member of this class.

With this initial course offering, the Marine Laboratory's instructional program received strong support, including financial. Doctor John Mackin and Dr. Richard Baldauf (acting head, Wildlife and Fisheries Sciences Department) promoted the development of marine science and fisheries courses that required a sea-side facility. This increase in summer instructional courses led to development of year-round graduate course offerings and facilities for graduate student research. Also, the third floor of Building 311 was converted for dormitory and kitchen use at a cost of $1.00 per day to each student. During this period, the Moody Foundation of Galveston provided moderate support for graduate stipends and library resources. These improvements supported graduate students' use of the laboratory as a site and base for research in estuarine and fisheries biology and fostered a strong program in toxic algae research. Also, during this period the laboratory gradually became an all-university facility. Other universities (Rice, University of Houston, Sam Houston State University, Stephen F. Austin State University, University of Texas Medical Branch, and other nearby educational institutions) began to use the laboratory as a site for student research, field trips, and short courses.

The resident faculty increased from two (H. Harry and S. Ray) in 1964 to six by 1967 with the

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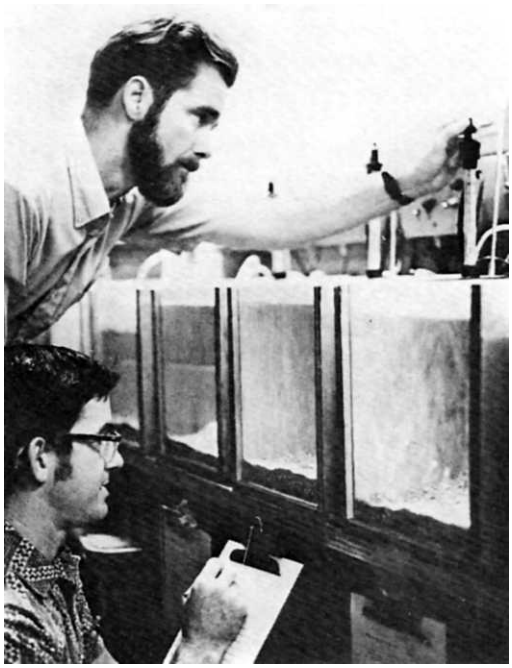

Fig. 2. David Aldrich with graduate student John Holland (circa 1960).

addition of Drs. David V. Aldrich, William B. Wilson, Edward Chin, and Tai S. Park. With the addition of these four faculty members, the research activity increased considerably. In 1966, Dr. Chin transferred the operation of the R/V *Anton Bruun* program, operated by the National Science Foundation, from Woods Hole Oceanographic Institute to the Texas A&M Marine Laboratory. The *Anton Bruun* program provided much-needed general support for laboratory operation (e.g., a Xerox copying machine) and funding to add Ms. Margie Watson to the administrative staff. During this period, three individuals, Anita Sievers (Aldrich), Joanne Molenock, and Margarite Bains, completed all requirements for the M.S. in Biology while in residency at the Marine Laboratory. Doctor Kirk Strawn and his students, working with Dr. Aldrich (Fig. 2), greatly increased the graduate student research activity at the laboratory. Doctor Strawn (acting head, Wildlife and Fisheries Science Department) and later Dr. James Teer (head, Wildlife and Fisheries Sciences Department) strongly supported the teaching and research programs at the Marine Laboratory. Many of their graduates did most of their research and course work at this facility (Fig. 3).

With the establishment of the College of Geosciences, which contained the Department of Oceanography, the laboratory director reported to Dr. Horace Byers, the first dean of the College of Geosciences. Dean Byers strongly supported the Marine Laboratory, and the instructional support was greatly improved by the establishment of an interdepartmental instructional account (No. 12840) whereby the laboratory received fiscal support from teaching earnings. Until Dean Byers arranged for compensation for instructional effort, the laboratory was required to generate two ''soft'' dollars for each dollar of university support.

Fig. 3. Anita Aldrich, circa 1960.

Following the establishment of the College of Geosciences, I was invited to attend the monthly executive meetings held on the College Station campus. At one of these meetings, I mentioned to Dean Byers that we needed lab benches for the invertebrate lab on the second floor of Building 311. Shortly thereafter, a cattle carrier arrived from Prairie View A&M University with a load of disassembled lab benches. Many pieces had to be cleaned of cow manure, but we were happy to get the benches. Many students studied invertebrates under Dr. Don Harper on Prairie View hand-me-downs.

Funding for the Marine Laboratory increased dramatically when Texas A&M was designated the Texas Sea Grant College in 1968. Many of the laboratory's on-going research projects meshed well with the National Sea Grant goals. Sea Grant, under the direction of Dr. John Calhoun, provided support to expand research and graduate student activities at the Marine Laboratory. The Department of Biology and the Department of Wildlife and Fisheries Sciences had a strong presence at this seaside facility during this

Fig. 4.

period. Moreover, several other departments (geology, oceanography, statistics institute, meteorology, and education) taught one or more courses at this facility.

In its early days (late 1960s), the Marine Biomedical Institute (MBI) of the University of Texas Medical Branch of Galveston occupied a portion of Building 311 for several months. Initially, TAMU was a partner with MBI and contributed $50,000 annually for its support. Colonel Robert Martindale opened an administrative office on the third floor of the west wing of Building 311 (we returned UTMB's favor of 1952). This action resulted in TAMUG's resident graduate students losing their kitchen and dormitory rooms. Later TAMU withdrew from this partnership.

With the appointment of Captain Bennett M. Dodson, U.S. Navy, as superintendent of the Texas Maritime Academy in 1961, the east wing of Building 311 was renovated to provide housing and classrooms beginning in 1963 for sophomore Maritime Academy cadets, who had spent their freshman year on the College Station campus. The Maritime Academy occupied the Fort Crockett facility for several years until classrooms, dormitories, and laboratories became available on the Mitchell Campus on Pelican Island. (The maritime cadets' ship, moored on the Mitchell Campus in 1971, was used as the dormitory for all cadets when the lab and classroom building opened in the fall of 1971.)

In 1971, the late Dr. William H. Clayton was appointed dean (later provost) of College of Marine Sciences and Maritime Resources. This new college housed three major divisions: the Texas Maritime Academy, the Coastal Zone Laboratory, and the new Moody Institute of Marine Sciences. The Marine Laboratory's role was drastically changed from research and graduate instruction to primarily undergraduate

Fig. 5. Sammy Ray, Aug. 2007.

teaching. The Marine Laboratory's personnel and its functions were absorbed into the Department of Marine Sciences, which I headed. This department was authorized in 1973 to grant a B.S. degree in marine sciences, with options in marine biology, marine sciences, and maritime systems engineering.

I first learned of the plan to expand undergraduate programs in Galveston through the establishment of the College of Marine Sciences and Maritime Resources from Admiral James D. Craik (superintendent of the Texas Maritime Academy). He called me in one day and showed me a confidential letter detailing the plans. He asked if I knew about the plans, I did not. This seemed strange since the Marine Laboratory was to play a major role in the proposed plan. I can only guess that my ''known'' opposition to an undergraduate marine biology degree on the main campus in College Station kept me out of the loop! Earlier, Dr. Hermann Kleerkoper (biology department) and I had opposed the offering of an undergraduate marine biology degree because we felt the program was weak and that marine biology was better as a graduate program following a good foundation in basic biology. Later, I learned that some biology

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faculty members believed that I opposed their plan because I was planning a similar program in Galveston. Nothing could have been further from the truth!

Shortly after seeing Admiral Craik's confidential letter, I attended a meeting at the old Jack Tar Hotel in Galveston. During this meeting, Dr. A. Spilhaus (father of the Sea Grant Program) gave a talk in celebration of an anniversary of the establishment of the National Sea Grant program. At this meeting, I was sitting beside Dr. William H. Clayton. As Dr. Spilhaus began to mention A&M's expansion in Galveston as one of the influences of the Sea Grant program, Dr. Clayton whispered in my ear, ''He's going to make a public announcement of the Galveston program.'' I knew immediately that this program would drastically affect the Marine Laboratory—its almost immediate demise! My instant comment to Dr. Clayton was, ''I wonder who my new boss will be?'' He replied, ''You'll like him.'' He did not tell me at this time that he would be my boss.

Shortly after this meeting, Dr. Clayton called me in and asked me what role I'd like to play in the new organization. After looking at the table of organization that he had placed on a blackboard, I chose ''Director of the Coastal Zone Laboratory.'' Initially, he had offered this position to Dr. Donald Hood (formerly chemical oceanographer at College Station), currently at the University of Alaska. Doctor Hood did not accept the position. Although I accepted the position as head of the Marine Sciences Department, the Coastal Zone Laboratory was more compatible with my experience and interests.

The basic components of TAMUG, a branch campus of Texas A&M University, began their infancy in Building 311. What began as a small residency program of 22 graduate students in 1964 had grown by the fall of 2009 to seven academic departments with an overall enrollment of 1,774 students (1,719 undergraduate and 55 graduate students). Thus, Building 311 has served well since 1956 as the incubator of the ''Aggie'' presence on Galveston Island, TX (Fig. 4).

Note: Most of the current occupants of Building 311 moved to a new science building on Pelican Island in the summer of 2010. Building 311 suffered relatively little damage from Hurricane Ike. The author plans to ride out the next storm in Building 311 (Fig. 5).

Both Sammy Ray's laboratory and office are now located at the Texas A&M University at Galveston Mitchell Campus on Pelican Island. The island is part of the city of Galveston and is linked to Galveston Island by a causeway. His laboratory is in the Sea Aggie Center, and his office is in the recently dedicated Oceans and Coastal Studies Building.

In addition to growth of infrastructure for the campus, the student population of the university is growing. It is estimated for fall 2011, that there will be 1,937 undergraduate and 63 graduate students.

MARINE BIOLOGY DEPARTMENT, TEXAS A&M UNIVERSITY AT GALVESTON. Date accepted: April 1, 2011.